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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/511,936	08/03/2005	Robert Riener	82331	9503
23685 7590 06/08/2010 KRIEGSMAN & KRIEGSMAN 30 TURNPIKE ROAD, SUITE 9 SOUTHBOROUGH, MA 01772				
EXAMINER				
HADZONOZ, BANAFSHEH				
ART UNIT		PAPER NUMBER		
3715				
MAIL DATE		DELIVERY MODE		
06/08/2010		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/511,936

**Applicant(s)**

RIENER ET AL.

**Examiner**

Banafsheh Hadizonooz

**Art Unit**

3715

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 February 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 6, 7 and 10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 6, 7 and 10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SI.08)  
Paper No(s)/Mail Date \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **Detailed Action**

In response to the amendment filed on 02/24/2010, claims 6, 7 and 10 are pending.

This action is made Final.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 6 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayka et al. (US 5, 688,118) in view of Vardimon et al. (US 5,752,832).**

Regarding claim 6, Hayka discloses a simulation system for dentistry wherein forces can be exerted on a tooth secured in a model of a jaw using a tool in order to examine or work on the tooth (See Col.6, 33-39). Hayka further discloses a single sensor measuring device fixed underneath the model of the jaw (See Col.11, 24-37) constructed as six-component force-moment sensor (See Col.9, 16-56), Wherein the components of force (the resistance of the region that is being drilled) is transferred to the processing unit (e.g. display unit 68). The data processor further comprises a memory (See Fig. 4 and Col.10, 9-59). Hayka does not explicitly disclose that the forces are converted into electrical measuring signals. However, Hayka discloses that both mechanical and electrical sensors can be used to simulate the region of a tooth being drilled. Hayka does not specifically disclose a plurality of reference-force-time curves of

different dental treatment steps. However Vardimon discloses a method for measuring tooth tightening, wherein the force applied to the teeth is measured as a function of time in order to determine the tightness between the teeth for orthodontic purposes. Vardimon further discloses measuring and processing the exerted force via a processing unit (See Abstract and Col.3, 43-54 and figures 3 and 4). Therefore it would have been obvious to one of ordinary skill in the art to modify Hayka's invention to include the well-known method of measuring force as a function of time as disclosed by Vardimon in order to accommodate user with an accurate performance feedback in dentistry training.

**Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hayka et al. (US 5, 688,118) in view of Vardimon et al. (US 5,752,832) and further in view of Azerad et al. (US 2004/0091845).**

Regarding claim 7, Hayka/Vardimon do not specifically disclose generating acoustic signals corresponding to a specific force/time. Azerad discloses acoustic signal patterns stored in correlation with the measured force/time course are retrieved and displayed by an acoustic display unit, wherein the multitude of sound samples are stored in the data memory in which case by means of a program subject to the actual force/time course of the simulated tooth treatment a sound sample belonging to it can be displayed (See P.4, [0073]). Therefore, it would have been obvious to one of ordinary skill in the art to modify Hayka/Vardimon's invention to incorporate the features of Azerad's invention in order to create a more realistic environment for training the users.

***Response to Arguments***

Applicant's arguments, with respect to claim 6 have been fully considered and are persuasive. The rejection of claim 6 under 35 U.S.C 112 2nd paragraph has been withdrawn.

Applicant's arguments filed 02/24/2010 have been fully considered but they are not persuasive.

Applicant argues that the device developed by the prior art of record, Hayka, is very different from that developed by the present inventors. Applicant further argues that Hayka uses a dental hand-piece in order to carry out the steps disclosed in the invention, whereas the claimed invention discloses an examination procedure that is carried out without using instrument. Examiner respectfully disagrees. Examiner notes that claim 1 specifically discloses using a tool or hand in order to examine the tooth. Examiner further notes that the claims in the instant application are apparatus claims and regardless of how the steps of the instant application are carried out, Hayka discloses the same components as disclosed in the claimed invention. Furthermore, the hand piece of Hayka's invention is a substitute for the various apparatuses that a dentist uses in performing treatment procedure. The same hand piece is also disclosed in figure 1 of Renier's invention. The fact that a hand-piece is used in Hayka to perform the procedure does not exclude the possibility of examining the tooth by hand. Applicant further disclosed that the secondary reference uses the force-time curves for a different purpose. Examiner notes that the graphing the exerted force as a function of time is well-known in the art as correctly pointed out by the applicant and although the

force-time curves in Vardimon are for a different purpose than that in the claimed invention, examiner has cited the secondary reference, Vardimon, to further emphasize that the method is in fact well-known.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Banafsheh Hadizonooz whose telephone number is 571-272-1242. The examiner can normally be reached on 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Xuan Thai can be reached on (571) 272- 7147. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BH

/Cameron Saadat/

Primary Examiner, Art Unit 3715